



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Frederik Marcel Van Der Vliet

Serial No.: 10/644,395

Filed: August 19, 2003

For: **Multiplexer Having Improved Efficiency**

Group No.: 2874

Examiner: Wood, Kevin S.

Docket No. LIGHT2700

CERTIFICATION UNDER 37 CFR § 1.8	
I hereby certify that the documents referred to as enclosed herein are being deposited with the United States Postal Service as first class mail on this date <u>5-18-09</u> , in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231	
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Pre-Appeal Brief Request for Review

This communication is in response to the Advisory Action mailed on April 16, 2009. The Advisory Action maintains the rejections in the Office Action mailed on December 5, 2008 (the Office Action). As a result, the following Remarks address the arguments made in the Office Action.

Claims 1, 3-11, 13-18, 20-22, and 35-46, 48-58, and 60-70 are pending in the application. Of these, the only independent claims are 1, 18, 37, 53, 60 and 62. Each of the independent claims stands rejected under 35USC§102 or 35USC§103 as being unpatentable over U.S. Patent Number 5,586,209 (Matsuura).

REMARKS

Each of the independent claims recites “**multi-mode** waveguides” and “the waveguides intersecting one another.” As a result, in order for Matsuura to properly support the rejection, Matsuura must teach **multi-mode** waveguides that intersect one another.

First argument that the cited art does not teach every element of the claims.

The Office Action cites Figure 6 as teaching waveguides that **intersect** one another as is claimed. However, Matsura describes Figure 6 as follows:

“FIG. 6 ... consists of 7 connected optical branching devices BR1, BR2, BR3, BR4, BR5, BR6 and BR7 **of the type shown in FIG. 4**” (C4, L36 and C16, L3, *emphasis added*).

As a result, Matsura teaches that the structure of the branching devices illustrated in Figure 6 can be discerned from Figure 4. However, **the branching devices shown in Figure 4 do not have intersecting waveguides**. Since the branching devices in Figure 6 are “**of the type shown in FIG. 4**” and the branching devices shown in Figure 4 do not have intersecting waveguides, the branching devices in Figure 6 do not have intersecting waveguides. As a result, Figure 6 does not teach or suggest waveguides that intersect one another as recited in the claims. Since Matsura does not teach or suggest every limitation of the claims, the claims are patentable over Matsura.

Second argument that the cited art does not teach every element of the claims

The rejection is also based on the argument that the waveguide tapers of Figure 4 (and thus 6) expand out to a multimode waveguide. Even if the Applicant were to concede this, Matsura still fails to teach the claim limitation. For instance, Matsura teaches that the waveguides 20 and 21 are both single mode waveguides. As a result, using the Examiner’s interpretation of the taper, Figure 4 (and thus 6) teaches the Examiner’s multimode waveguide coupled with two single mode waveguides. However, the claims require the intersection of multimode waveguides. Since coupling of a multimode waveguide with two single mode waveguides would still fail to teach intersection of multimode waveguides, Matsura does not teach or suggest every limitation of the claims. For this reason alone, the claims are patentable over Matsura.

Claims 3-11, 13-17, 20-22, and 35-36, 38-46, 48-52, 54-58, 61, and 63-70

Each of claims 3-11, 13-17, 20-22, and 35-36, 38-46, 48-52, 54-58, 61, and 63-70 depends from Independent Claim 1, 18, 37, 52, 60, or 62. Since the Independent Claims are believed to be in condition for allowance, claim 3-11, 13-17, 20-22, and 35-36, 38-46, 48-52, 54-58, 61, and 63-70 are also believed to be in condition for allowance.

Conclusion

The Applicant respectfully submits that legal error has been made by rejecting the pending claims as anticipated by Mead and/or Sunderland. For these reasons, allowance of claims 1-19 and 26-27 is respectfully requested.

Respectfully submitted

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